

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Koji NOZAKI et al

Serial No.: 09/015,287

Filed: January 29, 1998



Group Art Unit: 1752

Examiner: J. Chu

For: POLYMER COMPOUND FOR A CHEMICAL AMPLIFICATION RESIST AND A FABRICATION PROCESS OF A SEMICONDUCTOR DEVICE USING SUCH A CHEMICAL AMPLIFICATION RESIST

REQUEST FOR RECONSIDERATION

Assistant Commissioner for Patents
Washington, D.C. 20231

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January 24, 2000

Sir:

In response to the Office Action dated August 24, 1999, applicants request favorable reconsideration of the above-identified application. Claims 1-23 are pending.

Claims 1-17 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-12 and 14 of copending application Serial No. 09/080,530. Furthermore, claims 1-17 were rejected under 35 USC §103(a) as being unpatentable over JP 09-0906737 (Nozaki et al). Favorable reconsideration of these is rejections is earnestly solicited.

It should be noted that the bonding position of the mevalonic lactone is different with regard to the carbonyl carbon atom between the present invention and the '530 application. As a result of the foregoing difference, there occurs a ring-opening reaction represented at page 17, line 5 of the specification of the present invention under existence of a photoacid generator (PAG), while the

reaction is inherently different from the reaction represented in columns 9 and 10 of Nozaki et al. '637 or at page 6 of the '530 application.

The foregoing difference in the mechanism of reaction is confirmed in Nozaki et al., J. Photopolymer Science and Technology, Volume 10, Number 4, (1997), pp. 545-550, published on June 24, 1997, a copy attached herewith. Please note that the date of publication of the foregoing article is later than the priority date of June 23, 1997 for the present application.

In the lower right column of page 547 of the article, Table 3 represents the result of the monomer desorption detection conducted by NMR. Referring to Table 3, it can be seen that no acid desorption was observed for the sample "GBL" corresponding to the resist of the present invention, while an acid conversion percent of 82.2% is observed for the sample "MLMA" corresponding to the resist of Nozaki et al. '637. Thus, Table 3 of the article clearly demonstrates the substantial difference in the mechanism for the photochemical reaction between the present invention and Nozaki et al. '637.

Accordingly, based on the above-noted structural differences between the claims of the present application and the claims of the copending application, favorable reconsideration of the obviousness-type double patenting rejection is earnestly solicited.

Furthermore, Nozaki et al. '637 provides no teaching or suggestion of the claimed acid-sensitive polymer compound for the reasons noted above.

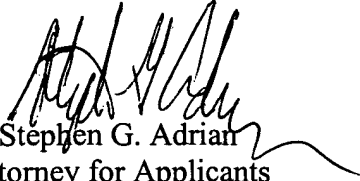
For at least the foregoing reasons, the claimed invention distinguishes over the cited art and defines patentable subject matter. Favorable reconsideration is earnestly solicited.

Should the Examiner deem that any further action by applicants would be desirable to place the application in condition for allowance, the Examiner is encouraged to telephone applicants' undersigned attorney.

In the event that this paper is not timely filed, applicants hereby petition for an appropriate extension of time. The fee for any such extension may be charged to our Deposit Account No. 01-2340.

Respectfully submitted,

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Attachments: Journal of Photopolymer Science and Technology,
Volume 10, Number 4 (1997) 545-550
Petition for Extension of Time

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